TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 20, 2007

Mr. Kris Gaus
Air Quality Specialist
Quality Environmental Protection
American Electric Power
P.O. Box 660164
Dallas, Texas 75266-0164

Re: Permit Alteration
Permit Numbers: 4381 and PSD-TX-3
Welsh Power Station
Regulated Entity Number: RN100213370
Customer Reference Number: CN600126767
Account Number: TF0012D

Dear Mr. Gaus:

This is in response to your letter dated March 8, 2007, requesting revision of Special Condition Nos. 2, 3, 4, and 6A of the above-referenced permit. We understand you seek to remove design heat input values and name plate generator ratings that were listed in your permit, and clarify that the sulfur content limit of the coal is on an as received "wet basis." We also understand you seek to add Special Condition No. 29, which will require additional stack sampling of particulate matter, carbon monoxide, and volatile organic compounds every third years.

As indicated in Title 30 Texas Administrative Code § 116.116(c), and based on our review, your request is hereby approved and Permit Numbers 4381 and PSD-TX-3 are altered. Enclosed are the altered permit conditions and MAERT to replace those currently attached to your permit. Please note that the enclosed MAERT does not reflect the currently applicable nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compound (VOC) emission limits, which are the limits specified in the MAERT attached to Ms. Anne Inman's letter dated May 27, 2005. We remind you that those NO_x, CO, or VOC emission limits should be incorporated in accordance with Texas Commission on Environmental Quality (TCEQ) guidance at time of renewal or amendment.

Mr. Kris Gaus
Page 2
March 20, 2007

Re: Permit Numbers 4381 and PSD-TX-3

Your cooperation in this matter is appreciated. If you need further information or have any questions, please contact Mr. Erik Hendrickson at (512) 239-1095 or write to the Texas Commission on Environmental Quality, Office of Permitting, Remediation, and Registration, Air Permits Division (MC-163), P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality.

Sincerely,

Richard A. Hyde, P.E., Director
Air Permits Division
Office of Permitting, Remediation, and Registration
Texas Commission on Environmental Quality

RAH/EH/pl

Enclosure

cc: Air Permits Section Chief, New Source Review, Section (6PD-R), Environmental Protection Agency, Region 6, Dallas
Mr. Charles Murray, Air Manager, Region 5 - Tyler

Project Number: 110539

SPECIAL CONDITIONS

Permit Numbers 4381 and PSD-TX-3

EMISSION STANDARDS AND FUEL SPECIFICATIONS

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table. The annual rates are based on a rolling 12-month period.

   If one emission rate limitation should be more stringent than another emission rate limitation, the more stringent limitation shall govern and be the standard by which compliance will be determined.

2. Sulfur dioxide (SO_2) emissions from the stack of the Unit 1 Boiler, designated as Emission Point No. (EPN) 1, shall not exceed 1.2 lb/MMBtu while firing at full load. (3/07)

3. Emissions of oxides of nitrogen (NO_x), carbon monoxide (CO), SO_2, particulate matter (PM), and volatile organic compounds (VOC) from the stack of the Unit 2 Boiler, designated as EPN 2, shall not exceed the following limits while firing at full load: (3/07)

Pollutant	Emissions
NO_x	0.7 lb/MMBtu (3-hr rolling average)
CO	0.085 lb/MMBtu (3-hr rolling average)
SO_2	1.1 lb/MMBtu (3-hr rolling average)
PM	0.075 lb/MMBtu (3-hr rolling average)
VOC	0.073 lb/MMBtu (3-hr rolling average)

4. Emissions of NO_x, CO, SO_2, PM, and VOC from the stack of the Unit 3 Boiler, designated as EPN 3, shall not exceed the following limits while firing at full load: (3/07)

Pollutant	Emissions
NO_x	0.7 lb/MMBtu (3-hr rolling average)
CO	0.0303 lb/MMBtu (3-hr rolling average)
SO_2	1.12 lb/MMBtu (3-hr rolling average)
PM	0.069 lb/MMBtu (3-hr rolling average)
VOC	0.0036 lb/MMBtu (3-hr rolling average)

5. Opacity of emissions from the Unit 1 Boiler stack (EPN Boiler 1), Unit 2 Boiler stack (EPN Boiler 2), and Unit 3 Boiler stack (EPN Boiler 3) must not exceed 20 percent averaged over a six-minute period, except for those periods described in Texas Commission on Environmental Quality (TCEQ) Title 30 Texas Administrative Code § 111.111(a)(1)(E).

6. Fuels used in the Unit 1, 2, and 3 Boilers shall be limited to the following:

   A. Sub-bituminous coal containing no more than 0.5 percent total sulfur by weight on a wet (as received) basis.

   B. No. 2 fuel oil.

   The use of any other fuel will require a modification to this permit. (3/07)

FEDERAL REQUIREMENTS

7. The sources covered under this permit shall comply with the requirements of the U.S. Environmental Protection Agency regulations on Standards of Performance for New Stationary Sources promulgated for Fossil Fuel-Fired Steam Generators in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subparts A and D including the applicable test methods and procedures specified in 40 CFR § 60.46. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit condition shall govern and be the standard by which compliance shall be demonstrated.

COMPLIANCE TESTING

8. For Unit 1 and Unit 2 Boilers, initial compliance testing for PM, SO_2, NO_x, and opacity was completed on July 15 through 18, 1980. Initial compliance testing has not been performed for Unit 3 Boiler based on the fact that this boiler is very similar in design and operation to the Unit 1 and Unit 2 Boilers. Additional testing shall be performed for all three boilers when required by the Executive Director of the TCEQ.

CONTINUOUS DETERMINATION OF COMPLIANCE

9. In order to demonstrate continuous compliance with the opacity limit of Special Condition No. 5, the holder of this permit shall operate and maintain a certified continuous emission monitoring system for measuring opacity of emissions.

10. In order to demonstrate continuous compliance with the SO_2 emission limit as stated in Special Condition Nos. 2, 3, and 4, the holder of this permit shall measure and record SO_2 emissions using one of the methods specified in 40 CFR § 75.11(a).

11. Data from the continuous emission monitors for flow, SO_2, NO_x, CO_2, and continuous opacity monitors required by 40 CFR Part 60 and 40 CFR Part 75 may be used to determine compliance with the conditions of this permit.

ASH HANDLING

12. Emissions from the fly ash silo vents shall be controlled with Baghouses (EPN-7, EPN-8, and EPN-9).

13. Emissions from fly ash loading into trucks from the fly ash silos shall be controlled by venting the displaced air through the Silo Baghouses (EPN Ash1, EPN Ash 2, and EPN Ash 3).

RECORDKEEPING

14. For all emission sources covered under this permit, all emission records and all continuous monitor measurements, including monitor performance testing measurements, all monitor calibration checks and adjustments, and maintenance performed on these systems must be retained for at least five years and must be made available upon request to the Executive Director or any agent of the TCEQ.

15. The holder of this permit shall retain records of the average fuel-firing rate, in units of tons of coal per hour and million British thermal units per hour (MMBtu/hr) for a minimum of two years from the date of recording. The average fuel firing rate shall be based on the higher heating value of the fuel. The average fuel firing rate, in units of tons of coal per hour and MMBtu/hr, shall be calculated at least monthly. This information may be used to determine compliance with the emissions limitations of Special Condition No. 1. (3/07)

16. The firing rate (MMBtu/hr) of fuel oil shall be recorded for each 24-hour time period of fuel oil firing, along with the date, time, and duration of fuel oil firing. The quantity, higher heating value and grade(s) of the fuel oil fired shall be clearly noted for each occurrence. This data shall be maintained in a permanent form suitable for inspection. (3/07)

17. The holder of this permit shall retain records of the electric power generating rate in Unit 1, 2, and 3 Boilers in units of megawatts, for a minimum of two years from the date of recording.

18. The holder of this permit shall comply with the applicable recordkeeping requirements of 40 CFR § 60.7; 40 CFR § 60.45g, and 40 CFR Part 75.

REPORTING

19. The holder of this permit shall comply with the applicable reporting requirements of 40 CFR § 60.7, 40 CFR § 60.45g, and 40 CFR Part 75.

20. If the electric power generation of the Unit 1 and 2 Boiler exceeds, by more than 10 percent, the electric power (in megawatts) maintained during initial compliance testing, the company must notify, in writing, the Executive Director of the TCEQ; and the source may be subject to additional sampling to demonstrate continued compliance with all applicable state and federal regulations.

ADDITIONAL CONDITIONS

21. The evaporation of nonhazardous turbine cleaning waste is authorized in Unit 2 Boiler of the Welsh Power Plant with the following limitations:

    A. Injection rate shall not exceed 5 gal/min,

    B. The approximate quantity of turbine cleaning fluid evaporated in Unit 2 Boiler will be 8,100 gallons for the 27 hour boiler evaporation operation,

    C. Total emissions for all air contaminants during this evaporation procedure shall not exceed 1.73 pounds/hr and 0.0234 ton/year.

22. The evaporation of nonhazardous boiler cleaning waste generated as the result of periodic cleaning (once every six to eight years) of Unit 1, 2, and 3 Boilers located at Southwestern Electric Power Company's Wilkes Power Plant is authorized in Unit 1 Boiler of Welsh Power Plant with the following limitations:

    A. The injection rate of the boiler cleaning waste shall be at the maximum rate of 50 gallons per minute until all of the cleaning waste is evaporated,

B. The quantity of boiler cleaning waste transported from the Wilkes Power Plant to the Welsh Power Plant to be burned in the Unit 1 Boiler will be approximately 65,000 gallons.

23. The permittee is authorized to burn spent activated carbon generated every two years from the Welsh Power Plant's water treatment system in Unit 1, 2, and 3 Boilers, after it is blended with coal, with the following limitations:

A. Maximum feed rate shall not exceed 1,712 pounds/hr.

B. The quantity of spent activated carbon to be burned in the boilers will be approximately 33,000 pounds for the 20 hours burn operation.

24. The permittee is authorized to evaporate ammoniated citric acid cleaning solution per each boiler cleaning episode in Unit 1, 2, and 3 Boilers of the Welsh Power Plant by injection with the following limitations:

A. The injection rate of the cleaning solution shall not exceed 50 gallons per minute.

B. The quantity of cleaning solution to be evaporated in the boilers will be approximately 140,000 gallons.

25. The permittee is authorized to evaporate spent boiler cleaning solution generated from cleaning of Unit 3 Boiler in Unit 2 Boiler of the Welsh Power Plant with the following limitations:

A. The maximum evaporation rate is 27 gallons per minute.

B. The quantity of spent boiler cleaning solution to be evaporated in Unit 2 Boiler will be approximately 180,000 gallons.

C. Evaporation procedure will be conducted once every six to eight years.

26. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TCEQ or any local air pollution control agency having jurisdiction.

27. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:

A. The facility identification numbers as submitted to the Emission Inventory Section of the TCEQ.

B. The EPNs as listed on the maximum allowable emission rates table.

28. Upon request by the Executive Director of the TCEQ or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sampling and/or analysis or the fuel(s) utilized in the boiler or shall allow the TCEQ or any other air pollution control agency representatives to obtain a sample for analysis.

ADDITIONAL MONITORING

29. The holder of this permit shall perform stack sampling once prior to the expiration date of this permit, and once every third year thereafter as specified in Paragraph C below, to establish the actual quantities of particulate matter (PM), carbon monoxide (CO), and volatile organic compounds (VOC) being emitted into the atmosphere from the Unit 1, 2, and 3 Boilers (EPN-1, EPN-2, and EPN-3). The purpose of such sampling will be to determine compliance with the PM, CO, and VOC emission limits in this permit. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and applicable test methods.

The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

A. The TCEQ Tyler Regional Office shall be contacted soon after testing is scheduled but not less than 30 days prior to sampling to schedule a pretest meeting. The notice shall include:

(1) Date for pretest meeting.
(2) Date sampling will occur.
(3) Name of firm conducting sampling.
(4) Type of sampling equipment to be used.
(5) Method or procedure to be used in sampling.
(6) Procedure used to determine turbine loads during and after the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director or the TCEQ Austin Compliance Support Division shall approve or disapprove of any deviation from specified sampling procedures.

B. Each boiler shall be tested at full load for the atmospheric conditions which exist during testing.

C. Sampling as required by this condition shall be conducted at any time between the first day of March and the last day of October. Additional sampling may be required by the TCEQ or EPA.

D. Within 90 days after the completion of sampling required herein, three copies of the sampling reports shall be distributed as follows:

One copy to the EPA Region 6 Office, Dallas.
One copy to the TCEQ Tyler Regional Office.
One copy to the TCEQ Austin Compliance Support Division.

E. Sampling reports shall comply with the conditions of Chapter 14 of the TCEQ Sampling Procedures Manual. Information in the stack sampling report shall include (at a minimum) the following data for each test run:

(1) hourly coal firing rate (in tons);

(2) average coal Btu/lb, expressed both on an as-received basis and a dry basis;

(3) average steam generation rate in millions of pounds per hour;

(4) average generator output in MW;

(5) control device operating parameters;

(6) emissions in the units of the limits of this permit, lb/hr and lb/MMBtu; and

(7) any additional records deemed necessary during the stack sampling pre-test meeting.

F. A complete copy of the sampling reports required by this permit condition shall be kept at the plant for the life of the permit. Sampling reports shall be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction. (3/07)

Dated March 20, 2007

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 4381 and PSD-TX-3

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
EPN-1	Unit 1 Boiler	NO_x	3609.2	15808.3
		CO	153.7	673.2
		VOC	18.4	80.6
		SO_2	6187.2	27100
		PM	515.6	2258.3
EPN-7	Fly Ash Silo No. 1	PM	96.0	420.1
EPN-2	Unit 2 Boiler	NO_x	3609	15808
		CO	438	1916
		VOC	19	82
		SO_2 (4)	5771	25277
		PM	387	1694
EPN-8	Fly Ash Silo No. 2	PM	<0.1	<0.1
EPN-3	Unit 3 Boiler	NO_x	3609	15808
		CO	156	684
		VOC	19	82
		SO_2 (4)	5771	25277
		PM	358	1569
EPN-9	Fly Ash Silo No. 3	PM	<0.1	<0.1

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources use area name or fugitive source name.
(3) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
SO_2 - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM_{10}.
PM_{10} - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
(4) Boiler SO_2 and PM emissions originally authorized under PSD by letter from EPA dated November 9, 1976, which is supplanted by this permit.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

Dated March 20, 2007

CHAPTER 6

STACK SAMPLING FOR PARTICULATE MATTER

General

Stack sampling for particulate matter quantification is conducted using classical sampling techniques, and must be performed isokinetically. The portion of a sample caught in the impinger section of the sampling train must always be analyzed and reported. This is because the TCEQ definition of particulate matter includes both front and back half contributions; and to accurately compare the mass emission result with the air permit mass emission rate requires both. Chapter 1 also discussed the inclusion of condensibles and impinger material in emission rate calculations.

EPA Reference Methods are required for all sampling results which are to satisfy EPA regulations. [redacted] determination of particulate matter is dependent on the rule, regulation, and/or permit conditions. In the event that a recognized method cannot be applied to a particular situation, alternate methods should have advance TCEQ approval; however, when the results will satisfy EPA requirements, EPA's final review and approval must be sought by TCEQ Engineering Services.

Isokinetic Sampling

To obtain a representative sample of a gas stream containing particulate matter, the sample must be collected isokinetically, i.e., the kinetic energy of the gas stream in the stack is equal to the kinetic energy of the gas stream through the sampling nozzle. Since the composition of the two gas streams is the same, isokinetic conditions are maintained if the velocity in the stack is equal to the velocity through the nozzle. If a sample of particulate matter is not collected isokinetically, inaccurate results may be obtained.

Whenever an object is placed in a moving gas stream, some disturbance of the flow patterns will occur. Isokinetic sampling through a sharp-edged nozzle will minimize the flow disturbance caused by the sampling nozzle. Figure 6-1 illustrates this point. Large (heavy) particles tend to travel in a straight line and are not greatly affected by flow disturbances, whereas small (light) particles tend to follow the flow pattern. In a gas stream containing large and small particles, over-isokinetic sampling will produce a low pollutant mass rate (PMR) because fewer large particles will be caught than are representative of the flow stream. Under-isokinetic sampling will produce a high PMR due to a greater than representative number of large particles that will be caught.

The velocity of the gas stream in a stack generally varies from point to point; therefore, the flow rate or velocity through the sampling nozzle must be adjusted to maintain isokinetic conditions at each